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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,859	03/28/2001	Mayumi Nagasaki	Q63819	1635

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EXAMINER	
RAO, ANAND SHASHIKANT	

ART UNIT	PAPER NUMBER
2613	7

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/818,859	NAGASAKI, MAYUMI	
	Examiner	Art Unit	
	Andy S. Rao	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 5-6.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Yokoyama et al., (hereinafter referred to as "Yokoyama").

Yokoyama discloses a motion vector searching device which includes a motion vector searching portion supplied with an input signal representative of a succession of pictures for dividing each of said input picture signal into blocks and for searching for a motion vector as a searched motion vector for each of the blocks of each of said pictures in a search area of said input picture signal for each of the blocks of each of said pictures, said motion vector searching device (Yokoyama: figure 1) comprising: a learning portion for learning tendencies of the searched motion vectors for previous pictures previous to a current picture of the pictures of said input picture signal to produce tendency information representative of said tendencies (Yokoyama: column 5, lines 30-53); and a determining portion for determining the search area for each of the blocks of said current picture on the basis of said tendency information to cause said motion vector searching portion to search for the motion vector as the searched motion vector for each of the blocks said current picture in the search area for each of the blocks of said current picture (Yokoyama: column 9, lines 45-668; column 10, lines 1-20), as in claim 1.

Regarding claim 2, Yokoyama discloses the learning portion learns the tendencies of the motion vectors for said previous pictures by detecting horizontal and vertical components of the searched motion vectors for said pictures (Yokoyama: column 6, lines 45-65), as specified.

Regarding claim 3, Yokoyama discloses that the determining portion determines the search area (Yokoyama: column 9, lines 10-45), as specified.

Yokoyama discloses a motion vector searching method which includes a motion vector searching step supplied with an input signal representative of a succession of pictures for

dividing each of said input picture signal into blocks and for searching for a motion vector as a searched motion vector for each of the blocks of each of said pictures in a search area of said input picture signal for each of the blocks of each of said pictures, said motion vector searching device (Yokoyama: figure 1) comprising: a learning step for learning tendencies of the searched motion vectors for previous pictures previous to a current picture of the pictures of said input picture signal to produce tendency information representative of said tendencies (Yokoyama: column 5, lines 30-53); and a determining step for determining the search area for each of the blocks of said current picture on the basis of said tendency information to cause said motion vector searching step to search for the motion vector as the searched motion vector for each of the blocks said current picture in the search area for each of the blocks of said current picture (Yokoyama: column 9, lines 45-668; column 10, lines 1-20), as in claim 4.

Regarding claim 5, Yokoyama discloses the learning step learns the tendencies of the motion vectors for said previous pictures by detecting horizontal and vertical components of the searched motion vectors for said pictures (Yokoyama: column 6, lines 45-65), as specified.

Regarding claim 6, Yokoyama discloses that the determining step determines the search area (Yokoyama: column 9, lines 10-45), as specified.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al., (hereinafter referred to as "Yokoyama") in view of Horne.

Yokoyama discloses a motion vector searching device which includes a motion vector searching operation supplied with an input signal representative of a succession of pictures, of dividing each of said input picture signal into blocks and for searching for a motion vector as a searched motion vector for each of the blocks of each of said pictures in a search area of said input picture signal for each of the blocks of each of said pictures, said motion vector searching device (Yokoyama: figure 1) comprising: a learning operation for learning tendencies of the searched motion vectors for previous pictures previous to a current picture of the pictures of said input picture signal to produce tendency information representative of said tendencies (Yokoyama: column 5, lines 30-53); and a determining operation for determining the search area for each of the blocks of said current picture on the basis of said tendency information to cause said motion vector searching operation to search for the motion vector as the searched motion vector for each of the blocks said current picture in the search area for each of the blocks of said current picture (Yokoyama: column 9, lines 45-668; column 10, lines 1-20), as in the claim 7. However, Yokoyama fails to disclose explicitly storing the motion vector searching operation on a recording medium for executing a software based program. Horne discloses that is it known to execute a motion vector searching operation (Horne: column 7, lines 10-55) by means of an executed software program stored on a recording medium in order to make efficient use of processing resources (Horne: column 11, lines 60-65; column 12, lines 1-20). Accordingly, given this teaching it would have been obvious for one of ordinary skill in the art to incorporate the use of Horne's software implementation of motion vector searching with the Yokoyama method, in

order to make efficient use of the Yokoyama processing resources while executing the motion vector searching method. The Yokoyama method, now implemented as an executed software program stored on a recording medium, has all of the features of claim 7.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hayashi discloses a motion vector search apparatus and method.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (703)-305-4813. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S. Kelley can be reached on (703)-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andy S. Rao
Primary Examiner
Art Unit 2613

ANDY RAO
PRIMARY EXAMINER

asr

April 28, 2004